

CLAIMS

1. An anchor assembly for securing a fixation rod, such assembly comprising a spinal anchor assembly having a screw axis and a head member with a slot and an open distal end adapted for passage of a linking element such as a rod or cable therethrough and a cap for closing the open end
5 wherein the head member comprises an upwardly extending body having at least a partial flange portion extending about a perimeter of said head member, and wherein the cap includes a cover having a plurality of spaced apart radially extending rim protrusions adapted for passing through the partial flange portion when the cover is moved along the screw axis and rotating into engagement with the partial flange portion of the head member
10 so as to close the open end and thereby capture the linking member in the slot, said cap further having a centrally-placed clamping member for tightening down to further clamp the captured linking member.
- 15 2. The assembly of claim 1, wherein the head member includes a pair of reduction tabs extending upwardly therefrom, and said cap includes a corresponding pair of circumferentially oriented slots configured for passage of the reduction tabs therethrough so as to allow relative rotation of the head member and the cap.
- 20 3. The assembly of claim 1, wherein the clamping member is a clamping screw that passes centrally through the cap for locking the linking member in position.
4. The assembly of claim 2, wherein the clamping member includes a clamping screw that passes centrally through the cap for locking the linking member in position.
- 25 5. The assembly of claim 1, wherein the partial flange portion of the head member extends externally of the perimeter, and said cap rim protrusions project inwardly from a dependent circumferential body.
- 30 6. The assembly of claim 1, wherein the partial flange portion of the head member extends internally of the perimeter, and said cap fits within the head member.

7. An anchor assembly for securing a linkage such as a rod or cable, wherein the anchor assembly comprises
an anchor element configured for attachment to a bone, and having a protruding top member
5 including an open slot for passing the linkage therethrough, and
a cap for closing the open slot of the top member
wherein the top member and the cap are adapted to twist-lock together by a partial rotation to
cover the slot so as to capture the linkage, and the cap further includes a clamping member for
tightening down to secure the linkage.

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8. The anchor assembly of claim 7, wherein the top member and cap twist-lock together by engagement of respective flange segments on said top member and said cap.

9. The anchor assembly of claim 8, wherein at least some of the flange segments are sloped
15 along a radial direction.

10. The anchor assembly of claim 7, wherein the clamping member includes a locking bolt threaded in the cap.

20 11. The anchor assembly of claim 7, wherein the top member includes a surface forming a circumferential ridge for centering the cap.

12. The anchor assembly of claim 7, wherein the top member includes reduction tabs, and the cap includes slots for passage of the reduction tabs therethrough and sized to permit said partial
25 rotation of the cap relative to the top member.

13. The anchor assembly of claim 7, wherein the top member includes radially inwardly protruding capture protrusions, and the cap is a twist-in cap.

30 14. The anchor assembly of claim 7, wherein the anchor element is an element selected from the group of elements consisting of monoaxial screws, polyaxial screws, hooks, transverse

connectors, offset connectors, slotted connectors, wire or cable anchors, and anchors for the connection of multiple longitudinal members.

15. A spinal anchor assembly for securing a linking element such as a fixation rod or cable,
5 wherein the anchor assembly includes a head with an open slot for receiving the linking element, the head being adapted to anchor to bone, and said assembly further includes a cap for closing the head to capture the linking element in the slot, said head and said cap each having respective sets of radially-protruding segments positioned such that the respective sets pass between each other as the cap is moved along an axis of the anchor assembly, and lock against each other as
10 the cap is rotated about said axis through a partial rotation.

16. The anchor assembly of claim 15, wherein said radially-protruding segments have a radially sloping lower surface to prevent disengagement.

15 17. The anchor assembly of claim 15, wherein said cap is an internal twist-in cap.

18. The anchor assembly of claim 15, wherein said cap extends radially outside the head.

19. A method of securing an elongated linking element such as a rod, wire or cable, such
20 method comprising the steps of
providing an anchor assembly configured for fastening to a bone
providing a top structure carried by the anchor assembly and including an open end configured for passage of the linking element through the open end,
providing a cap adapted to close the open end and capture the linking element therein by a partial
25 rotation with respect to the top structure, and
providing an adjustable clamp attached to the cap for clamping the captured linking element.

20. The method of claim 19, wherein the step of providing a top structure includes providing a top structure with reduction tabs, and wherein the cap is configured with arcuate slots for
30 rotation while said reduction tabs pass through the cap.

21. The method of claim 19, where the step of providing an anchor assembly includes providing a bone screw, and said top structure is a separate component fitted over the bone screw.